

Rio Tinto Eagle Mine
4547 County Road 601
Champion, MI 49814, US
T 906-486-1257
F 906-486-1053

RECEIVED

DEC 17 2012

Mr. Randy Conroy
MDEQ Upper Peninsula District Office
Water Resources Division
420 5th Street
Gwinn, MI 49841-3004

MDEQ UP DISTRICT OFFICE

December 14, 2012

Re: Humboldt Mill Facility: 30-Day Incident Report for Bentonite Release to Wetland "EE"
Waterbody General Inspection – National Pollutant Discharge Elimination System
(NPDES) Permit No. MI0058649
Designated Name: Kennecott-Humboldt Mill

Dear Mr. Conroy:

Rio Tinto Eagle Mine LLC (Rio Tinto) received your correspondence from November 15, 2012, concerning the release of bentonite material to nearby wetlands during construction activities at the Humboldt Mill. As you referenced in your letter, Rio Tinto is currently constructing a containment wall along the north end of the Humboldt Pit per Part 632 Mine Permit requirements. During these construction activities, bentonite slurry flowed through the subsurface to a wetland on the north side of the pit. Attached is a letter submitted to Mr. Joe Maki on November 1, 2012, detailing the incident and the immediate actions taken to minimize the impact to Wetland EE.

Following the immediate response detailed in the attached letter, a Minor Project Joint Permit Application (JPA) was filed with MDEQ for the installation of a silt fence and turbidity curtain in Wetland EE. These controls have been installed and remain in place to ensure that the bentonite is contained within that area and will not travel to the Escanaba River.

In addition to installing the sedimentation controls, the contractors discontinued work at that location and moved activities to the far west end of wall construction. This allowed time for the engineering and construction teams to develop a new approach for construction in the area susceptible to bentonite seepage. Several different construction methods were evaluated, including gradient reduction, sheet piling, soil compaction, additional grouting and slurry minimization.

After surveying the existing ground conditions (i.e. cobbles), it was determined that the optimal approach for construction would be to minimize and control the slurry introduction into the trench. The excavator will work in small increments moving forward while adding a small amount of bentonite slurry behind a soil dam to test the integrity of the subsurface. If the slurry level holds elevation, the dam will be removed and the excavator will repeat the process. This allows increased control over slurry introduction, quantity, and thickening if necessary. The wetland sedimentation controls that are currently installed per the Minor Projects JPA will be removed following completion of construction and any wetland restoration efforts that are required.

Mr. Randy Conroy
MDEQ Upper Peninsula District Office
December 14, 2012
Page Two

Should you have any questions concerning this correspondence, please contact me at 906-486-1257, ext. 229.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'KM', followed by a long horizontal line.

Kristen Mariuzza, P.E.
Environmental and Permitting Manager

Cc: Ms. Ginny Pennala, WRD, UP District
Mr. Mike Smolinski, WRD, UP District
Mr. Joe Maki, Office of Oil, Gas and Minerals
Geri Grant, SWP, CEMP

Rio Tinto Eagle Mine
4547 County Road 601
Champion, MI 49814, US
T 906-486-1257
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November 1, 2012

VIA E-MAIL

Mr. Joe Maki
Michigan Department of Environmental Quality
Upper Peninsula District Office
420 – 5th Street
Gwinn, Michigan 49841

RE: HUMBOLDT MILL FACILITY: 10 DAY INCIDENT REPORT FOR BENTONITE RELEASE TO WETLAND "EE"

Dear Mr. Maki:

Pursuant to General Condition F.8 of Nonferrous Metallic Mineral Mining Permit Number MP 01 2010, as issued to Kennecott Eagle Minerals Company (KEMC) on February 9, 2010, this letter follows up our prompt verbal notice and provides a written report on an incident that recently occurred at the Humboldt Mill facility.

INCIDENT DESCRIPTION

On October 22, 2012, personnel from Remedial Construction Services, L.P. (Recon), under contract to Fluor Corporation (Fluor), KEMC's engineering, procurement and construction management firm for redevelopment of the Humboldt Mill facility, were excavating to construct a soil bentonite slurry wall near the northern terminus of the Humboldt Tailings Disposal Facility (HTDF). Construction of this wall is required by the conditions of KEMC's mine permit to limit subsurface flow of groundwater from the HTDF to Wetland EE. The slurry wall is being constructed in accordance with the HTDF Cut Off Wall Design and Basis of Design documents submitted and approved by the Michigan Department of Environmental Quality (MDEQ). As is typical of soil bentonite slurry wall construction, the excavation was being completed under a dilute aqueous slurry of bentonite (i.e., the trench excavation was full of approximately 5% bentonite slurry).

At approximately 10:00 a.m., as Recon personnel were excavating the slurry wall trench at station 18+80 (see enclosed plan Sheet 5, Attachment I), an approximately 10 foot long pocket of shotrock was encountered at a depth from approximately 6 feet below ground surface (bgs) to 10 feet bgs and approximately 10 feet long. Recon personnel recognized the material to be shotrock because a significant volume of shotrock had previously been encountered by Recon during preparation of the slurry wall construction workpad. Shotrock is generally described as 10-inch minus, angular to sub-angular material which readily transports fluid. Shotrock had not been encountered within the slurry wall trench up to this point. Shortly after encountering this pocket of shotrock, the liquid slurry elevation in the trench dropped by approximately three feet over the course of about thirty minutes, strongly suggesting the release of liquid bentonite slurry from the trench to the surrounding geologic formation. Some of the released bentonite slurry was retained in the geologic formation and some vented to the adjacent wetland.

INITIAL RESPONSE ACTIONS

Suspecting that the slurry may have migrated into voids in the subsurface, site personnel visually inspected the HTDF and Wetland EE near the work area for evidence of bentonite migration. No visible evidence of a release to the HTDF or to Wetland EE was noted at this time. Field construction quality assurance (CQA) testing was also completed to verify that the physical parameters and composition of the bentonite slurry in

Mr. Joe Maki
November 1, 2012
Page 2

the trench were appropriate. Upon completion of the tests, three 3,000 pound bags of dry bentonite were added directly to the slurry trench and mixed with the in-trench slurry to further increase the viscosity of the slurry mix and thereby improve its ability to plug subsurface voids. The slurry elevation in the trench was then re-established and site personnel continued to visually monitor the HTDF and Wetland EE for evidence of slurry migration during construction. At approximately 2:00 p.m., bentonite was observed to be venting into Wetland EE at three separate locations at the edge of the water.

Further response activities implemented on October 22, 2012, to address the venting of bentonite to Wetland EE included the addition of 6,000 pounds of additional dry bentonite to the slurry trench to further increase slurry viscosity, increase the sealing capabilities of the slurry and thereby limit the potential for migration of slurry from the trench. In addition, approximately 100 linear feet (LF) of silt fencing was constructed at the locations where venting was observed. The silt fencing was augmented with plastic sheeting to form a low permeability barrier to water/bentonite flow. Silt fencing was constructed in consultation with John Gustafson and Ginny Pennala of the MDEQ, Land and Water Management Division (LWMD), Upper Peninsula District Office.

Additional silt fencing and turbidity curtain were proposed to be constructed in Wetland EE as sedimentation control measures to mitigate migration of bentonite within the wetland. On October 26, 2012, approximately 450 LF of additional silt fencing was placed along the shore of the wetland in the area of and beyond where venting bentonite was observed. In addition, portable pumps have been set up to pump venting bentonite from the wetland to adjacent upland areas and periodic visual inspections of the HTDF and wetland are being performed. A turbidity curtain will be placed as an additional control measure beyond the limits of the existing silt fencing. These measures have been communicated to the MDEQ and are described in a Joint Permit Application (JPA) which was submitted to the MDEQ, LWMD on October 29, 2012. This JPA seeks a permit for construction of temporary sedimentation control measures in the wetland, which is regulated under Part 303 of the Michigan Natural Resources and Environmental Protection Act (NREPA). A copy of this application is presented as Attachment II to this letter. The sedimentation control measures described in the permit will be implemented as necessary in consultation with representatives of the MDEQ, LWMD.

ADDITIONAL REPORTING

As noted above, in accordance with General Condition F.7 of the Nonferrous Metallic Mineral Mining Permit, the incident described here was verbally reported to Joe Maki of the MDEQ, Upper Peninsula District Office during an October 22, 2012, telephone conversation with Kristen Mariuzza of KEMC. The MDEQ staff visited the site on October 23, 2012, inspecting the area of the release and providing guidance regarding control measures.

In addition, because response activities associated with this incident are not yet complete, in accordance with the requirements of General Condition F.8, a written final incident report will be submitted to your office within 30 days after the incident response is completed (i.e., sedimentation controls are removed from Wetland EE).

Should you have questions or concerns regarding anything presented here, please contact me at 906.486.1257, ext. 229.

Sincerely,

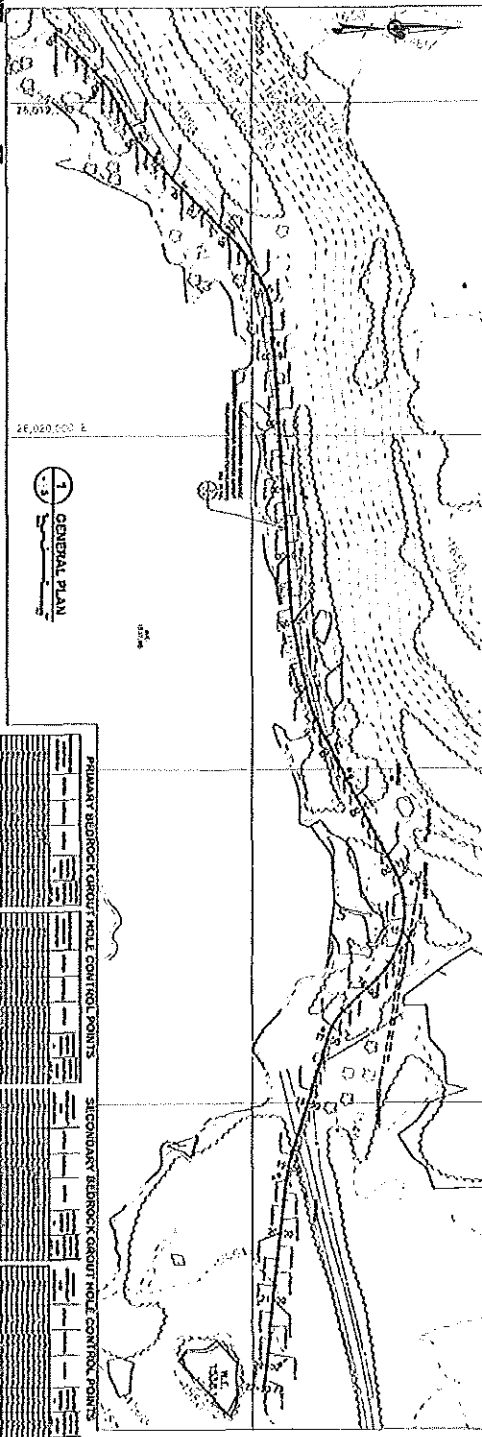
 FOR

Kristen Mariuzza, P.E.
Environmental & Permitting Manager

Attachments

ATTACHMENT I

SLURRY WALL PLAN SHEET #5



1 GENERAL PLAN

1. EXISTING GRADE
2. PROPOSED GRADE
3. PROPOSED CUT-OFF WALL
4. PROPOSED DRAINAGE
5. PROPOSED EROSION CONTROL
6. PROPOSED FILL
7. PROPOSED REMEDIATION
8. PROPOSED MONITORING
9. PROPOSED ACCESS
10. PROPOSED UTILITIES
11. PROPOSED STRUCTURES
12. PROPOSED LANDSCAPE
13. PROPOSED PLANTING
14. PROPOSED SIGNAGE
15. PROPOSED FENCE
16. PROPOSED LIGHTING
17. PROPOSED SECURITY
18. PROPOSED MAINTENANCE
19. PROPOSED DEMOLITION
20. PROPOSED RECONSTRUCTION

3 DETAIL OF BEDROCK GROUTING SEQUENCE

PRIMARY BEDROCK GROUT HOLE CONTROL POINTS			
HOLE NO.	DEPTH (FT)	GROUT TYPE	GROUT VOLUME (CU YD)
1	10.0	Grout A	1.0
2	12.0	Grout A	1.2
3	14.0	Grout A	1.4
4	16.0	Grout A	1.6
5	18.0	Grout A	1.8
6	20.0	Grout A	2.0
7	22.0	Grout A	2.2
8	24.0	Grout A	2.4
9	26.0	Grout A	2.6
10	28.0	Grout A	2.8
11	30.0	Grout A	3.0
12	32.0	Grout A	3.2
13	34.0	Grout A	3.4
14	36.0	Grout A	3.6
15	38.0	Grout A	3.8
16	40.0	Grout A	4.0
17	42.0	Grout A	4.2
18	44.0	Grout A	4.4
19	46.0	Grout A	4.6
20	48.0	Grout A	4.8
21	50.0	Grout A	5.0
22	52.0	Grout A	5.2
23	54.0	Grout A	5.4
24	56.0	Grout A	5.6
25	58.0	Grout A	5.8
26	60.0	Grout A	6.0
27	62.0	Grout A	6.2
28	64.0	Grout A	6.4
29	66.0	Grout A	6.6
30	68.0	Grout A	6.8
31	70.0	Grout A	7.0
32	72.0	Grout A	7.2
33	74.0	Grout A	7.4
34	76.0	Grout A	7.6
35	78.0	Grout A	7.8
36	80.0	Grout A	8.0
37	82.0	Grout A	8.2
38	84.0	Grout A	8.4
39	86.0	Grout A	8.6
40	88.0	Grout A	8.8
41	90.0	Grout A	9.0
42	92.0	Grout A	9.2
43	94.0	Grout A	9.4
44	96.0	Grout A	9.6
45	98.0	Grout A	9.8
46	100.0	Grout A	10.0
47	102.0	Grout A	10.2
48	104.0	Grout A	10.4
49	106.0	Grout A	10.6
50	108.0	Grout A	10.8
51	110.0	Grout A	11.0
52	112.0	Grout A	11.2
53	114.0	Grout A	11.4
54	116.0	Grout A	11.6
55	118.0	Grout A	11.8
56	120.0	Grout A	12.0
57	122.0	Grout A	12.2
58	124.0	Grout A	12.4
59	126.0	Grout A	12.6
60	128.0	Grout A	12.8
61	130.0	Grout A	13.0
62	132.0	Grout A	13.2
63	134.0	Grout A	13.4
64	136.0	Grout A	13.6
65	138.0	Grout A	13.8
66	140.0	Grout A	14.0
67	142.0	Grout A	14.2
68	144.0	Grout A	14.4
69	146.0	Grout A	14.6
70	148.0	Grout A	14.8
71	150.0	Grout A	15.0
72	152.0	Grout A	15.2
73	154.0	Grout A	15.4
74	156.0	Grout A	15.6
75	158.0	Grout A	15.8
76	160.0	Grout A	16.0
77	162.0	Grout A	16.2
78	164.0	Grout A	16.4
79	166.0	Grout A	16.6
80	168.0	Grout A	16.8
81	170.0	Grout A	17.0
82	172.0	Grout A	17.2
83	174.0	Grout A	17.4
84	176.0	Grout A	17.6
85	178.0	Grout A	17.8
86	180.0	Grout A	18.0
87	182.0	Grout A	18.2
88	184.0	Grout A	18.4
89	186.0	Grout A	18.6
90	188.0	Grout A	18.8
91	190.0	Grout A	19.0
92	192.0	Grout A	19.2
93	194.0	Grout A	19.4
94	196.0	Grout A	19.6
95	198.0	Grout A	19.8
96	200.0	Grout A	20.0
97	202.0	Grout A	20.2
98	204.0	Grout A	20.4
99	206.0	Grout A	20.6
100	208.0	Grout A	20.8
101	210.0	Grout A	21.0
102	212.0	Grout A	21.2
103	214.0	Grout A	21.4
104	216.0	Grout A	21.6
105	218.0	Grout A	21.8
106	220.0	Grout A	22.0
107	222.0	Grout A	22.2
108	224.0	Grout A	22.4
109	226.0	Grout A	22.6
110	228.0	Grout A	22.8
111	230.0	Grout A	23.0
112	232.0	Grout A	23.2
113	234.0	Grout A	23.4
114	236.0	Grout A	23.6
115	238.0	Grout A	23.8
116	240.0	Grout A	24.0
117	242.0	Grout A	24.2
118	244.0	Grout A	24.4
119	246.0	Grout A	24.6
120	248.0	Grout A	24.8
121	250.0	Grout A	25.0
122	252.0	Grout A	25.2
123	254.0	Grout A	25.4
124	256.0	Grout A	25.6
125	258.0	Grout A	25.8
126	260.0	Grout A	26.0
127	262.0	Grout A	26.2
128	264.0	Grout A	26.4
129	266.0	Grout A	26.6
130	268.0	Grout A	26.8
131	270.0	Grout A	27.0
132	272.0	Grout A	27.2
133	274.0	Grout A	27.4
134	276.0	Grout A	27.6
135	278.0	Grout A	27.8
136	280.0	Grout A	28.0
137	282.0	Grout A	28.2
138	284.0	Grout A	28.4
139	286.0	Grout A	28.6
140	288.0	Grout A	28.8
141	290.0	Grout A	29.0
142	292.0	Grout A	29.2
143	294.0	Grout A	29.4
144	296.0	Grout A	29.6
145	298.0	Grout A	29.8
146	300.0	Grout A	30.0
147	302.0	Grout A	30.2
148	304.0	Grout A	30.4
149	306.0	Grout A	30.6
150	308.0	Grout A	30.8
151	310.0	Grout A	31.0
152	312.0	Grout A	31.2
153	314.0	Grout A	31.4
154	316.0	Grout A	31.6
155	318.0	Grout A	31.8
156	320.0	Grout A	32.0
157	322.0	Grout A	32.2
158	324.0	Grout A	32.4
159	326.0	Grout A	32.6
160	328.0	Grout A	32.8
161	330.0	Grout A	33.0
162	332.0	Grout A	33.2
163	334.0	Grout A	33.4
164	336.0	Grout A	33.6
165	338.0	Grout A	33.8
166	340.0	Grout A	34.0
167	342.0	Grout A	34.2
168	344.0	Grout A	34.4
169	346.0	Grout A	34.6
170	348.0	Grout A	34.8
171	350.0	Grout A	35.0
172	352.0	Grout A	35.2
173	354.0	Grout A	35.4
174	356.0	Grout A	35.6
175	358.0	Grout A	35.8
176	360.0	Grout A	36.0
177	362.0	Grout A	36.2
178	364.0	Grout A	36.4
179	366.0	Grout A	36.6
180	368.0	Grout A	36.8
181	370.0	Grout A	37.0
182	372.0	Grout A	37.2
183	374.0	Grout A	37.4
184	376.0	Grout A	37.6
185	378.0	Grout A	37.8
186	380.0	Grout A	38.0
187	382.0	Grout A	38.2
188	384.0	Grout A	38.4
189	386.0	Grout A	38.6
190	388.0	Grout A	38.8
191	390.0	Grout A	39.0
192	392.0	Grout A	39.2
193	394.0	Grout A	39.4
194	396.0	Grout A	39.6
195	398.0	Grout A	39.8
196	400.0	Grout A	40.0
197	402.0	Grout A	40.2
198	404.0	Grout A	40.4
199	406.0	Grout A	40.6
200	408.0	Grout A	40.8
201	410.0	Grout A	41.0
202	412.0	Grout A	41.2
203	414.0	Grout A	41.4
204	416.0	Grout A	41.6
205	418.0	Grout A	41.8
206	420.0	Grout A	42.0
207	422.0	Grout A	42.2
208	424.0	Grout A	42.4
209	426.0	Grout A	42.6
210	428.0	Grout A	42.8
211	430.0	Grout A	43.0
212	432.0	Grout A	43.2
213	434.0	Grout A	43.4
214	436.0	Grout A	43.6
215	438.0	Grout A	43.8
216	440.0	Grout A	44.0
217	442.0	Grout A	44.2
218	444.0	Grout A	44.4
219	446.0	Grout A	44.6
220	448.0	Grout A	44.8
221	450.0	Grout A	45.0
222	452.0	Grout A	45.2
223	454.0	Grout A	45.4
224	456.0	Grout A	45.6
225	458.0	Grout A	45.8
226	460.0	Grout A	46.0
227	462.0	Grout A	46.2
228	464.0	Grout A	46.4
229	466.0	Grout A	46.6
230	468.0	Grout A	46.8
231	470.0	Grout A	47.0
232	472.0	Grout A	47.2
233	474.0	Grout A	47.4
234	476.0	Grout A	47.6
235	478.0	Grout A	47.8
236	480.0	Grout A	48.0
237	482.0	Grout A	48.2
238	484.0	Grout A	48.4
239	486.0	Grout A	48.6
240	488.0	Grout A	48.8
241	490.0	Grout A	49.0
242	492.0	Grout A	49.2
243	494.0	Grout A	49.4
244	496.0	Grout A	49.6
245	498.0	Grout A	49.8
246	500.0	Grout A	50.0
247	502.0	Grout A	50.2
248	504.0	Grout A	50.4
249	506.0	Grout A	50.6
250	508.0	Grout A	50.8
251	510.0	Grout A	51.0
252	512.0	Grout A	51.2
253	514.0	Grout A	51.4
254	516.0	Grout A	51.6
255	518.0	Grout A	51.8
256	520.0	Grout A	52.0
257	522.0	Grout A	52.2
258	524.0	Grout A	52.4
259	526.0	Grout A	52.6
260	528.0	Grout A	52.8
261	530.0	Grout A	53.0
262	532.0	Grout A	53.2
263	534.0	Grout A	53.4
264	536.0	Grout A	53.6
265	538.0	Grout A	53.8
266	540.0	Grout A	54.0
267	542.0	Grout A	54.2
268	544.0	Grout A	54.4
269	546.0	Grout A	54.6
270	548.0	Grout A	54.8
271	550.0	Grout A	55.0
272	552.0	Grout A	55.2
273	554.0	Grout A	55.4
274	556.0	Grout A	55.6
275	558.0	Grout A	55.8
276	560.0	Grout A	56.0
277	562.0	Grout A	56.2
278	564.0	Grout A	56.4
279	566.0	Grout A	56.6
280	568.0	Grout A	56.8
281	570.0	Grout A	57.0
282	572.0	Grout A	57.2
283	574.0	Grout A	57.4
284	576.0	Grout A	57.6
285	578.0	Grout A	57.8
286	580.0	Grout A	58.0
287	582.0	Grout A	58.2
288	584.0	Grout A	58.4
289	586.0	Grout A	58.6
290	588.0	Grout A	58.8
291	590.0	Grout A	59.0
292	592.0	Grout A	59.2

ATTACHMENT II

***OCTOBER 29, 2012, JOINT PERMIT APPLICATION
FOR CONSTRUCTION OF SEDIMENTATION CONTROLS
IN WETLAND EE***



AGENCY USE	Previous USACE File Number	Date Received	DEQ File Number	
	USACE File Number		Fee received \$	

Validate that all parts of this checklist are submitted with the application package. Fill out application and additional pages as needed.

☒ All items in Sections 1 through 9 are completed.

☒ Project-specific Sections 10 through 20 are completed.

☒ Dimensions, volumes, and calculations are provided for all impact areas.

☒ All information contained in the headings for the appropriate Sections (1-20) are addressed, and identified attachments (*) are included.

☒ Map, site plan(s), cross sections; one set must be black and white on 8 1/2 by 11 inch paper; photographs.

☒ Application fee is attached.

1 Project Location Information For Latitude, Longitude, and TRS Info anywhere in Michigan see www.mcqi.state.mi.us/wetlands/

Project Address (road, if no street address) 4547 County Road 601	Zip Code 49814	Municipality (Township/Village/City) Humboldt Township	County Marquette
Property Tax Identification Number(s) 62-06-211-001-10	Latitude 46.4940 N	Township/Range/Section (TRS) T 47N N or S; R 29W E or W;	
Subdivision/Plat and Lot Number N/A	Longitude - 87.8954 W	Sec 2 OR Private Claim #	

2 Applicant and Agent Information

Owner/Applicant (individual or corporate name) Rio Tinto Eagle Mine, LLC		Agent/Contractor (firm name and contact person) N/A	
Mailing Address 4547 County Road 601		Mailing Address N/A	
City Champlain	State MI	Zip Code 49814	
Contact Phone Number (906) 486-1257	Fax (906) 486-1053	Contact Phone Number N/A	Fax N/A
Email kristen.marluzza@riotinto.com		E-mail N/A	

☐ No ☒ Yes Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? If no, attach letter(s) of authorization from all property owners including the owner of the disposal site.

Property Owner's Name (if different from applicant) N/A	Mailing Address N/A
Contact Phone Number N/A	City N/A
	State N/A
	Zip Code N/A

3 Project Description

Project Name Wetland Sedimentation Control Measures	Preapplication File Number - - -P
Name of Water body Wetland EE	Date project staked/tagged October 23, 2012

The proposed project is on, within, or involves (check all that apply)

<input type="checkbox"/> an inland lake (5 acres or more)	<input type="checkbox"/> a Great Lake or Section 10 Waters
<input type="checkbox"/> a pond (less than 5 acres)	<input checked="" type="checkbox"/> a wetland
<input type="checkbox"/> a stream, river, ditch or drain	<input type="checkbox"/> a 100-year floodplain
<input type="checkbox"/> a legally established County Drain	<input type="checkbox"/> a dam
Date Drain was established	<input type="checkbox"/> a designated high risk erosion area
<input type="checkbox"/> a channel/canal	<input type="checkbox"/> a designated critical dune area
<input checked="" type="checkbox"/> 500 feet of an existing water body	<input type="checkbox"/> a designated environmental area

Project Use

☒ private

☒ commercial

☐ public/government

☐ project is receiving federal/state transportation funds

☐ Wetland Restoration

☐ other

Indicate the type of permit being applied for: ☐ General Permit ☒ Minor Project ☐ Individual (All other projects.) See Appendix C.

Written Summary of All Proposed Activities Construction of temporary silt fencing and other sedimentation control measures within Wetland EE in response to venting of bentonite to wetland. Water containing bentonite will be pumped from Wetland EE using a submersible pump. Bentonite is being used to construct a soil-bentonite slurry wall on upland property immediately adjacent to the wetland. Venting of bentonite slurry has been observed through an underground channel or other openings present in shallow geologic formations in the construction area.

Construction Sequence and Methods Silt fencing and other sedimentation control measures will be constructed on an "as needed" basis using hand placement methods in response to observed bentonite venting in and near Wetland EE. Water containing bentonite slurry will be withdrawn from Wetland EE using a submersible pump and discharged to nearby upland area.



1 Project Purpose, Use and Alternatives Attach additional sheets as necessary.					
Describe the purpose of the project and its intended use; include any new development or expansion of an existing land use. <i>Construction of a soil bentonite slurry wall is being completed as part of the applicant's redevelopment of the Humboldt Mill site, in accordance with the requirements of a Nonferrous Metallic Mining permit issued under Part 632 of the NREPA. Sedimentation control measures are proposed to be placed in Wetland EE to limit bentonite slurry migration into the wetland. Water containing bentonite slurry is proposed to be pumped from wetland to adjacent upland area without reduction of the water elevation in the wetland.</i>					
Describe the alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative locations, project layout and design, and construction technologies. For utility crossings include alternative routes and construction methods. <i>Soil erosion and sedimentation controls have been implemented at upland locations. The duration of slurry trench construction will be minimized to the extent practicable. The bentonite slurry in the slurry trench will be thickened by increasing the bentonite concentration, thereby increasing slurry viscosity and reducing the potential for venting.</i>					
5 Locating Your Project Site Attach a legible black and white map with a North arrow.					
Names of roads of closest intersection <i>US-41 and Wolf Lake Road/County Road Fx</i>					
Directions from main intersection to the project site, with distances from the best and nearest visible landmark and water body <i>Proceed approximately 300' east of Wolf Lake Rd. on US-41, turn south on paved drive at grey building, then immediately turn east, proceed approximately 2,000' on unpaid road (Co. Rd. Fnp, unlabelled) to fenced construction area.</i>					
Description of buildings on the site (color; 1 or 2 story, other) <i>Grey 2 story at US-41 turn-off, no other structures</i>			Description of adjacent landmarks or buildings (address; color; etc) <i>Grey 2 story building on S side of US-41</i>		
How can your site be identified if there is no visible address? <i>Slurry wall construction activity ongoing. Rio Tinto Eagle Mine, LLC employees available at Humboldt Mill site during normal business hours to assist in location of construction area.</i>					
6 Easements and Other Permits					
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property? ⇒ If yes, attach a copy. Provide copies of court orders and legal lake levels if applicable.					
List all other federal, interstate, state, or local agency authorizations including required assurances for Critical Dune Area projects.					
Agency	Type of Approval	Number	Date Applied	Date approved/Idenied	Reason for denial
MDEQ	Nonferrous Metallic Mining Permit	MP 01 2010	December 15, 2008	February 9, 2010	N/A
Marquette County Conservation District	SESC Permit	092-09	December 2008	August 25, 2009	N/A
7 Compliance					
If a permit is issued, when will the activity begin? (M/D/Y) <i>10/23/12</i>			Proposed completion date (M/D/Y) <i>12/31/12</i>		
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Has any construction activity commenced or been completed in a regulated area? ⇒ If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s).					
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Were the regulated activities conducted under a DEQ and/or USACE permit? ⇒ If Yes, list the permit numbers					
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Are you aware of any unresolved violations of environmental law or litigation involving the property? ⇒ If Yes, attach explanation.					
8 Adjacent Property Owners Provide current mailing addresses. Attach additional sheets/labels for long lists.					
<input type="checkbox"/> Established Lake Board <input type="checkbox"/> Lake Association	Contact Person	Mailing Address	City	State and Zip Code	
List all adjacent. If you own the adjacent lot, provide the requested information for the first adjacent parcel that is not owned by you.					
Property Owner's Name	Mailing Address		City	State and Zip Code	
<i>See Attachment I</i>					
9 Applicant's Certification Read carefully before signing.					



I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the DEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site before and during construction and after the completion of the project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

- ☒ Property Owner
☐ Agent/Contractor
☐ Corp. or Public Agency / Title

Printed Name
Kristen Marluzza

Signature
Kristen Marluzza

Date
October 26, 2012



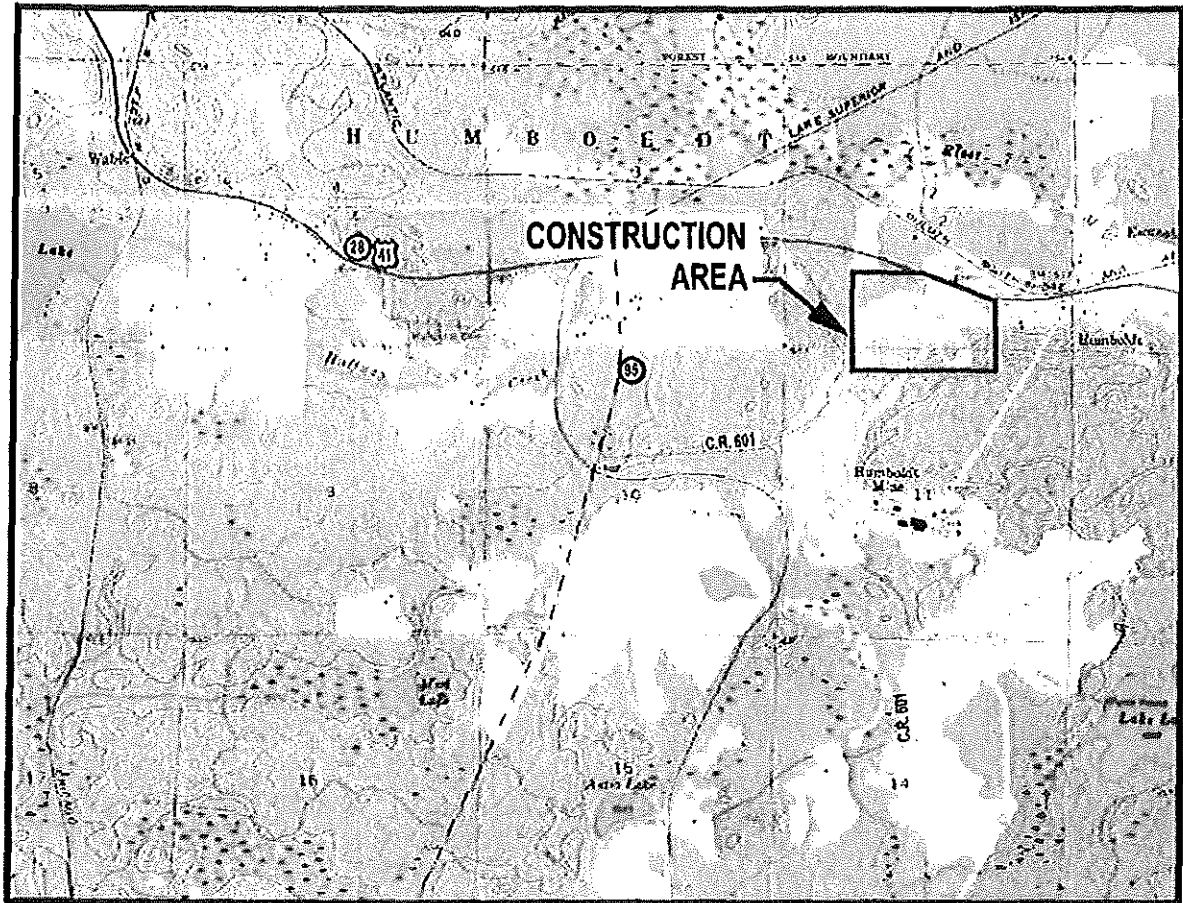
K. MOORING and NAVIGATION BUOYS (See EZ Guide for Sample Drawing) ➤ Provide a site plan showing the distances between each buoy and from the shore to each buoy, and depth (ft) of water at each location. ➤ Provide cross-section drawing(s) showing anchoring system(s) and dimensions.			
Purpose of buoy <input type="checkbox"/> mooring <input type="checkbox"/> navigation <input type="checkbox"/> scientific structures <input type="checkbox"/> swimming <input type="checkbox"/> other			
Number of buoys	Dimensions of buoys (ft) width height swing radius chain length		Boat Lengths Type of anchor system
Buoy Location: Latitude N Longitude W. ➤ Provide a table for multiple buoys.			
Do you own the property along the shoreline?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If No, attach an authorization letter from the property owner(s).
Do you own the bottomlands?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If No, attach an authorization letter from the property owner(s).
L. FENCES ➤ Provide an overall site plan showing the proposed fencing through streams, wetlands or floodplains. ➤ Provide a drawing of fence profile showing the design, dimension, post spacing, mesh, and distance from ground to bottom of fence.			
Purpose of fence <input type="checkbox"/> Airport <input type="checkbox"/> Cervidae <input type="checkbox"/> Livestock <input type="checkbox"/> Residential <input type="checkbox"/> Security <input checked="" type="checkbox"/> Other Silt Fence			
Total length (ft) of fence through streams 0 wetlands 650 feet floodplains		Fence height (ft) 3	Fence type and material Wood slat and geotextile fabric
M. OTHER - e.g., structure removal, maintenance or repair, aerator, dry fire hydrant, gold prospecting, habitat structures, scientific measuring devices, soil borings, or survey activities. Structure description, dimensions and volumes. Complete Sections 10A-C as applicable.			
III Expansion of an Existing or Construction of a New Lake or Pond (See Sample Drawings 4 and 15) ➤ Complete Section 10J for outlets and Section 17 for water control structures. ➤ Provide elevations, cross-sections and profiles of outlets, dams, dikes, water control structures and emergency spillways to nearest water bodies.			
Which best describes your proposed water body use (check all that apply) <input type="checkbox"/> mining <input type="checkbox"/> recreation <input type="checkbox"/> storm water retention basin <input type="checkbox"/> wastewater basin <input type="checkbox"/> wildlife <input type="checkbox"/> other			
Water source for lake/pond <input type="checkbox"/> groundwater <input type="checkbox"/> natural springs <input type="checkbox"/> Inland Lake or Stream <input type="checkbox"/> storm water runoff <input type="checkbox"/> pump <input type="checkbox"/> sewage <input type="checkbox"/> other			
Location of the lake/basin/pond <input type="checkbox"/> floodplain <input type="checkbox"/> wetland <input type="checkbox"/> stream (inline) <input type="checkbox"/> upland			
Maximum dimensions (ft) length width depth		Maximum Area: <input type="checkbox"/> acres <input type="checkbox"/> sq ft	
Has there been a hydrologic study performed on the site?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If Yes, provide a copy.
Has the DEQ conducted a wetland assessment for this parcel?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If Yes, provide a copy or WIP number.
Has a professional wetland delineation been conducted for this parcel?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If Yes, provide a copy with data sheets.
Spoils Disposal	Dredged or excavated spoils will be placed <input type="checkbox"/> on-site <input type="checkbox"/> landfill <input type="checkbox"/> USACE confined disposal facility <input type="checkbox"/> other upland off-site For disposal, provide a ➤ Detailed spoils disposal area location map and site plan with property lines. ➤ Letter of authorization from property owner of spoils disposal site, if disposed off-site.		

**12 Activities That May Impact Wetlands (See Sample Drawings 8 & 9). Complete other Sections as applicable.**

- Locate your site and wetland information with the DEQ Wetlands Map Viewer at www.michigan.gov/wetlands/
- For information on the DEQ's Wetland Identification Program (WIP) visit www.mi.gov/wetlands.
 - ⇒ Provide a detailed site plan with labeled property lines, upland and wetland areas, and dimensions and volumes of wetland impacts.
 - ⇒ Complete the wetland dredge and wetland fill dimension information below for each impacted wetland area.
 - ⇒ Attach tables for multiple impact areas or activities.
 - ⇒ Attach at least one cross-section for each wetland dredge and/or fill area; show wetland and upland boundaries on the cross-section.

Has the DEQ conducted a wetland assessment for this parcel?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	⇒ If Yes, provide a copy or WIP number.												
Has a professional wetland delineation been conducted for this parcel?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	⇒ If Yes, provide a copy with data sheets												
Is there a recorded DEQ easement on the property?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	⇒ If Yes, provide the easement number												
Did the applicant purchase the property before October 1, 1980?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	⇒ If Yes, provide documentation.												
Is any grading or mechanized land clearing proposed?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	⇒ If Yes, label the locations on the site plan.												
Has any of the proposed grading or mechanized land clearing been completed?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	⇒ If Yes, label the locations on the site plan												
Proposed Activity <table border="0"><tr><td><input type="checkbox"/> boardwalk or deck (Section 10I)</td><td><input type="checkbox"/> bridges and culverts (Section 14)</td><td><input type="checkbox"/> designated environmental area</td></tr><tr><td><input checked="" type="checkbox"/> dewatering</td><td><input type="checkbox"/> draining surface water</td><td><input type="checkbox"/> driveway / road</td></tr><tr><td><input type="checkbox"/> fences (Section 10L)</td><td><input type="checkbox"/> fill or dredge</td><td><input type="checkbox"/> restoration</td></tr><tr><td><input type="checkbox"/> septic system</td><td><input type="checkbox"/> stormwater discharge (Section 10J)</td><td><input checked="" type="checkbox"/> other Construction of sedimentation control measures</td></tr></table>			<input type="checkbox"/> boardwalk or deck (Section 10I)	<input type="checkbox"/> bridges and culverts (Section 14)	<input type="checkbox"/> designated environmental area	<input checked="" type="checkbox"/> dewatering	<input type="checkbox"/> draining surface water	<input type="checkbox"/> driveway / road	<input type="checkbox"/> fences (Section 10L)	<input type="checkbox"/> fill or dredge	<input type="checkbox"/> restoration	<input type="checkbox"/> septic system	<input type="checkbox"/> stormwater discharge (Section 10J)	<input checked="" type="checkbox"/> other Construction of sedimentation control measures
<input type="checkbox"/> boardwalk or deck (Section 10I)	<input type="checkbox"/> bridges and culverts (Section 14)	<input type="checkbox"/> designated environmental area												
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<input type="checkbox"/> septic system	<input type="checkbox"/> stormwater discharge (Section 10J)	<input checked="" type="checkbox"/> other Construction of sedimentation control measures												
FILL	Dimensions maximum length (ft) N/A maximum width (ft) N/A	Area <input type="checkbox"/> acres <input type="checkbox"/> sq ft	Average depth (ft)	Volume (cu yd)										
DREDGE	Dimensions maximum length (ft) N/A maximum width (ft) N/A	Area <input type="checkbox"/> acres <input type="checkbox"/> sq ft	Average depth (ft)	Volume (cu yd)										
Spills Disposal	Dredged or excavated spoils will be placed <input type="checkbox"/> on-site <input type="checkbox"/> landfill <input type="checkbox"/> USACE confined disposal facility <input type="checkbox"/> other upland off-site For disposal, provide a ⇒ Detailed spoils disposal area location map and site plan with property lines. ⇒ Letter of authorization from property owner of spoils disposal site, if disposed off-site.													
Septic System	The proposed project will be serviced by: <input type="checkbox"/> public sewer <input type="checkbox"/> private septic system ⇒ Show system on plans If a private septic system is proposed, has an application for a permit been made to the County Health Department? <input type="checkbox"/> No <input type="checkbox"/> Yes If Yes, has a permit been issued? <input type="checkbox"/> No <input type="checkbox"/> Yes ⇒ Provide a copy of the permit.													
Describe the wetland impacts, the proposed use or development, and the alternatives considered: <i>Construction of silt fence and turbidity curtain as a sedimentation control measure to mitigate venting of bentonite to wetland. Other, similar sedimentation control measures (e.g., hay bales) were considered. Placement of fill material in the wetland to prevent flow of bentonite slurry into the wetland was considered and rejected. Limited extraction of water from the wetland will also be conducted using a submersible pump discharging to nearby upland.</i>														
Does the project impact more than 1/3 acre of wetland? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ⇒ If Yes, submit a Mitigation Plan with the type and amount of mitigation proposed. For more information go to www.mi.gov/wetlands														
Describe how impacts to waters of the United States will be avoided and minimized: <i>Construction of silt fencing will mitigate migration of bentonite in wetland, thereby minimizing any potential impacts to surface water.</i>														
Describe how the impact to waters of the United States will be compensated. OR Explain why compensatory mitigation should not be required for the proposed impacts. <i>No compensation is required because wetlands will be protected through installation of silt fencing.</i>														

KEX0102SM10



TAKEN FROM 7.5 MINUTE SERIES TOPOGRAPHIC MAP
REPUBLIC AND CHAMPION QUADRANGLES
SCALE: 1" = 3000'



North

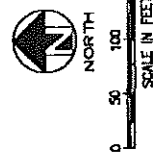
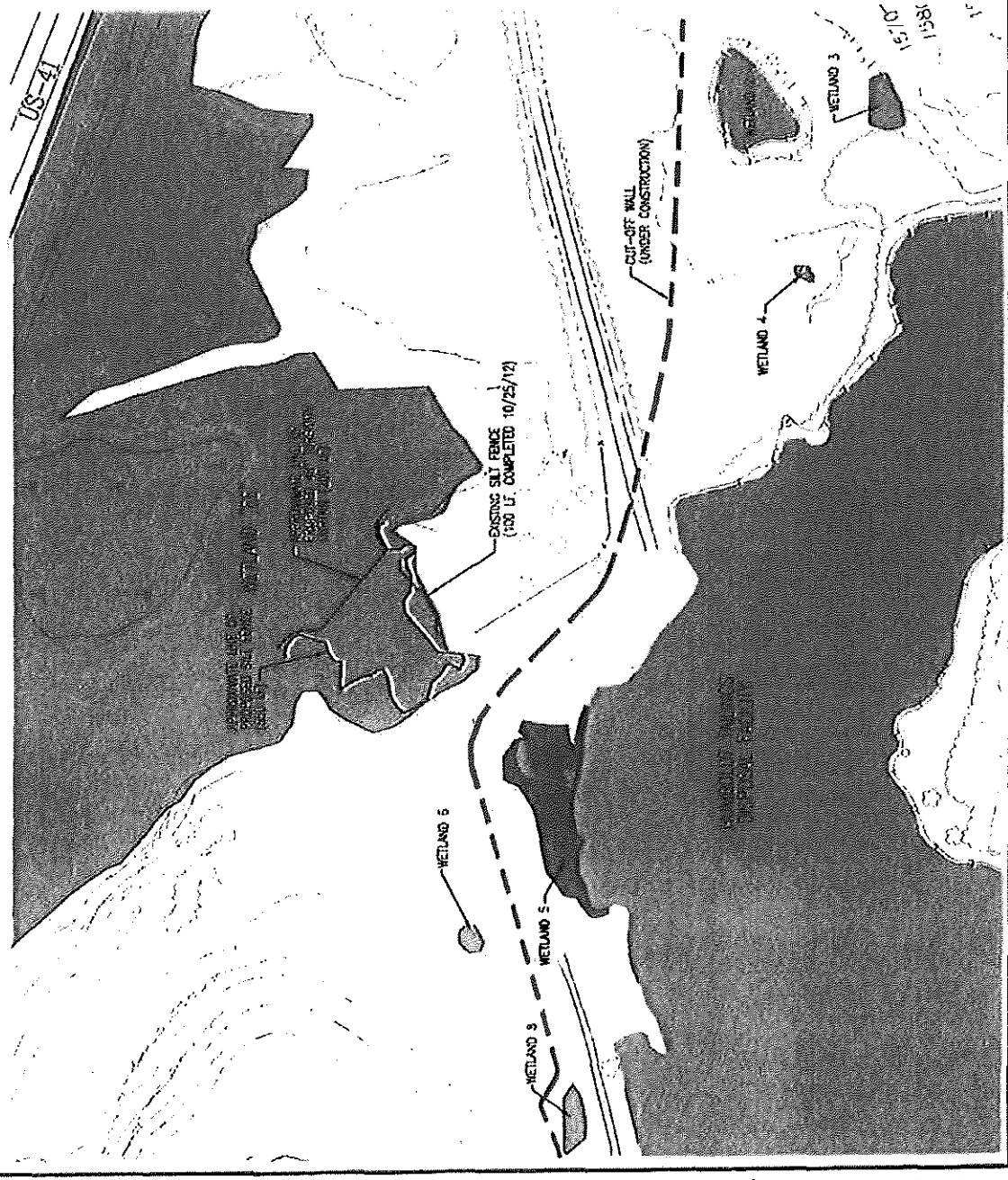


SCALE IN FEET

WETLAND SEDIMENTATION CONTROL CONSTRUCTION

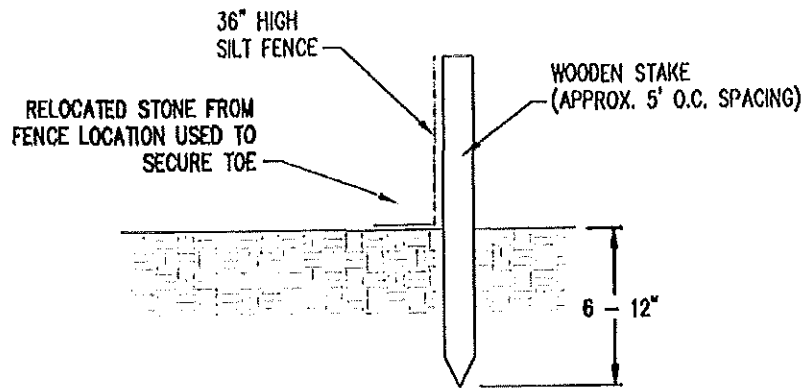
RIO TINTO EAGLE MINE, LLC
WETLAND "EE"
HUMBOLDT TOWNSHIP
MARQUETTE COUNTY
SHEET 1 OF 3
OCTOBER 2012

11/15/2011



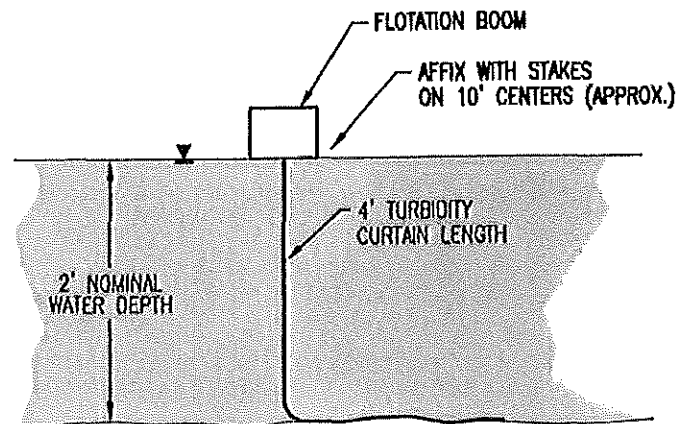
WETLAND SEDIMENTATION
CONTROL CONSTRUCTION

RIO TINTO EAGLE MINE, LLC
WETLAND "EE"
HUMBOLDT TOWNSHIP
MARQUETTE COUNTY
SHEET 2 OF 3
OCTOBER 2012



SILT FENCE DETAIL

NO SCALE



TURBIDITY CURTAIN DETAIL

NO SCALE

WETLAND SEDIMENTATION
CONTROL CONSTRUCTION

RIO TINTO EAGLE MINE, LLC
WETLAND "EE"
HUMBOLDT TOWNSHIP
MARQUETTE COUNTY
SHEET 3 OF 3
OCTOBER 2012

ATTACHMENT I

**RIO TINTO EAGLE MINE, LLC
HUMBOLDT TOWNSHIP, MARQUETTE COUNTY, MICHIGAN
ADJACENT PROPERTY OWNERS**

- Jeff P. & Joyce Ogea, 3891 CR FA, Champion, MI 49814
- Thomas & James Kumpu, 4612 Daniel Dr., Crystal Lake, IL 60014
- Holli Forest Products (Dave Holli), Cooper Lake Road, Ishpeming, MI 49849
- Christopher & Holly Ray, 2299 CR 601, Champion, MI 49814
- Humboldt Properties, LLC (Peter O'Dovero), 110 Airport Rd., Negaunee, MI 49866
- A. Lindberg & Sons Inc. (Roger Crimmins), 599 Washington Street, Ishpeming, MI 49849
- Humboldt Stone (Roger Crimmins), 560 Mather Ave., Ishpeming, MI 49849
- Edward & Sandra Ogea, 5637 US 41 West, Champion, MI 49814

ATTACHMENT II

**RIO TINTO EAGLE MINE, LLC
HUMBOLDT TOWNSHIP, MARQUETTE COUNTY, MICHIGAN
WETLAND DELINEATION**



King & MacGregor Environmental, Inc.
2520 Woodmeadow Drive SE
Grand Rapids, MI 49546
Phone (616)957-1231 • Fax (616) 957-2198

Memo

Date: October 15, 2008

To: Stephen Donohue, Foth Infrastructure & Environment, LLC

Cc: Dennis Donohue, Warner, Norcross & Judd, LLP
Vicky Peacey, Foth Infrastructure & Environment, LLC

From: Matthew MacGregor

Re: Humboldt Mill Site - WWTP Discharge Wetlands

King & MacGregor Environmental, Inc. (KME) was contracted by Foth Infrastructure & Environment, LLC (Foth I&E) to conduct baseline biological investigations within the Humboldt Mill Site in Marquette County, Michigan. On September 18 and 22, 2008, as part of these investigations, KME conducted a wetland delineation within the area directly north of the Humboldt Tailings Disposal Facility (HTDF) and south of the previously delineated Wetland EE (Figure 1). The intent of this report is to provide a description of the character of the wetlands identified and an opinion regarding the possible jurisdiction of the Michigan Department of Environmental Quality (MDEQ) over these wetlands.

Methods

The methods used to conduct this wetland delineation were consistent with the procedures and general practices used by the MDEQ (Michigan Department of Environmental Quality) as described in *A Technical Manual for Identifying Wetlands in Michigan* (MDEQ, 2001).

The wetland delineation was conducted on September 18 and 22, 2008. Each area of potential wetland was evaluated to determine if wetland vegetation, visual evidence of wetland hydrology and hydric soils were present. Based on this evaluation, an upland/wetland boundary was identified for each wetland. The wetland boundaries were delineated by placing numbered pink flagging at intervals along the identified boundaries. Each numbered flag was located by survey. Photographs were taken of each wetland (Photos 1 through 14).

Results

Eight wetlands were identified within the area of investigation. The wetlands were identified as wetlands 1 through 8 and are described below:

Wetland 1

This small emergent wetland is located in the eastern portion of the area of investigation, northeast of the HTDF. This wetland appears to have developed within a previously graded



Kennecott Eagle Minerals Company
Humboldt Mill Site - WWTP Discharge Wetlands

October 15, 2008
Page 1 of 5

area. Plant species identified within this wetland included broad-leaved cattail (*Typha latifolia*), sensitive fern (*Onoclea sensibilis*), interrupted fern (*Osmunda claytoniana*) and red-top grass (*Agrostis stolonifera*). Standing water was present within this wetland at the time of inspection. The soil column in this wetland was disturbed, consisting mainly of large broken rock and cobble. This wetland was identified using flags labeled 1-1 through 1-4.

Wetland 2

This emergent and open water wetland is located in the eastern portion of the area of investigation, northeast of Wetland 1. This wetland appears to have developed within a previously disturbed area, consisting mainly of an open water area within a bedrock or rock rubble depression. Plant species identified within this wetland included broad-leaved cattail, interrupted fern, wool grass (*Scirpus cyperinus*) and red-top grass. The soil column in this wetland was disturbed, consisting mainly of large broken rock, cobble and bedrock. This wetland was identified using flags labeled 2-1 through 2-6.

Wetland 3

This scrub/shrub wetland is located in the eastern portion of the area of investigation, south of Wetland 2, at the base of a steep exposed rock hillside. Plant species identified within this wetland included speckled alder (*Alnus incana*), swamp aster (*Aster puniceus*), wild strawberry (*Fragaria virginiana*), woodland horsetail (*Equisetum sylvaticum*), sensitive fern, and red-top grass. The soil column in this wetland was disturbed, consisting mainly of large broken rock and cobble. This wetland was identified using flags labeled 3-1 through 3-8.

Wetland 4

This emergent and open water wetland is located in the eastern portion of the area of investigation, along the northeast edge of the HTDF. Plant species identified within this wetland included speckled alder, broad-leaved cattail, wool grass and various sedge species (*Carex* sp.). The soil column in this wetland was disturbed, consisting mainly of saturated sands and large broken rock and cobble. This wetland was identified using flags labeled 4-1 through 4-4. It should be noted that a narrow (1-2 feet) band of wetland vegetation was observed intermittently along most of the HTDF shoreline. Due to its linear configuration and close proximity to the shore, it was not flagged.

Wetland 5

This scrub/shrub wetland is located on the western portion of the area of investigation, on the north side of the HTDF. Plant species identified within this wetland included speckled alder, balsam poplar (*Populus balsamifera*), quaking aspen (*Populus tremuloides*), blue-joint grass (*Calamagrostis canadensis*), varicolored iris (*Iris versicolor*), swamp aster, strict sedge (*Carex stricta*), stipitate sedge (*Carex stipitata*), woodland horsetail, sensitive fern, and red-top grass. The soil column in this wetland was disturbed, consisting mainly of saturated sand, broken rock and cobble. This wetland was identified using flags labeled 5-1 through 5-21.

Wetland 6

This scrub/shrub wetland is located in the western portion of the area of investigation, northwest of Wetland 5, at the base of a steep exposed rock hillside. Plant species identified within this wetland included speckled alder, blue-joint grass, garden fanny (*Tanacetum vulgare*) and sensitive fern. The soil column in this wetland was disturbed, consisting mainly of large broken rock and cobble. This wetland was identified using flags labeled 6-1 through 6-6.



Wetland 7

This scrub/shrub wetland is located in the western portion of the area of investigation, southwest of Wetland 6, at the base of a steep exposed rock hillside. Plant species identified within this wetland included speckled alder, blue-joint grass, garden tansy and sensitive fern. The soil column in this wetland was disturbed, consisting mainly of large broken rock and cobble. This wetland was identified using flags labeled 7-1 through 7-6.

Wetland 8

This scrub/shrub wetland is located in the western portion of the area of investigation, east of Wetland 7, at the base of a steep exposed rock hillside. Plant species identified within this wetland included speckled alder, blue-joint grass, garden tansy and sensitive fern. The soil column in this wetland was disturbed, consisting mainly of large broken rock and cobble. This wetland was identified using flags labeled 8-1 through 8-6.

Discussion

In order for the MDEQ to have regulatory authority over a wetland, the wetland must be contiguous to a lake, pond, and/or stream and/or over 5 acres in size. Due to their proximity to the HTDF, all of the wetlands identified in this investigation are likely regulated under the Michigan Natural Resources and Environmental Protection Act, P.A. 451 of 1994, (NREPA) Part 303, Wetland Protection.

The NREPA, Part 301 defines an "Inland lake or stream" as "...a natural or artificial lake, pond, or impoundment; a river, stream, or creek...or any other body of water that has definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water...". Further, "Ordinary high-water mark" is defined as "... the line between upland and bottomland that persists through successive changes in water levels, below which the presence and action of the water is so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil, and the vegetation...".

Based on evaluation of the shoreline of the HTDF, it appears that the Ordinary High Water Mark of this waterbody is located at Wetland Flag 4-1, or between elevation 1538.52 and 1538.78.



REFERENCES AND LITERATURE CITED

Michigan Department of Environmental Quality. 2001. MDEQ Wetland Identification Manual: A Technical Manual for Identifying Wetlands in Michigan. EQ2787.

United States Department of Agriculture. 2005. Soil Survey Geographic Database for Marquette County, Michigan. U.S. Department of Agriculture, Natural Resource Conservation Service. <http://www.SoilDataMart.nrcs.usda.gov>





Photo 1: Wetland 1a



Photo 2: Wetland 1b



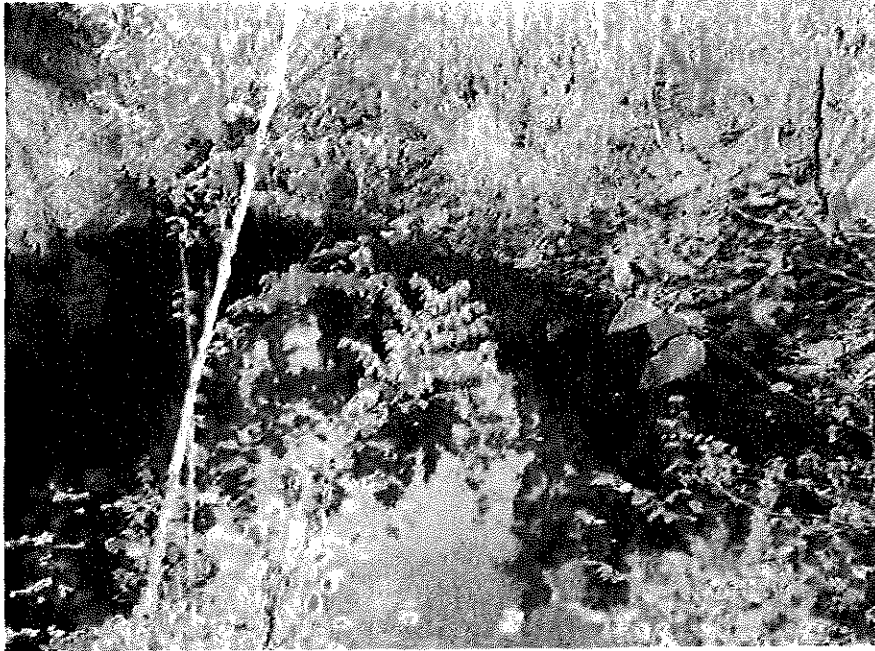


Photo 3: Wetland 2a



Photo 4: Wetland 2b





Photo 5: Wetland 3a



Photo 6: Wetland 3b



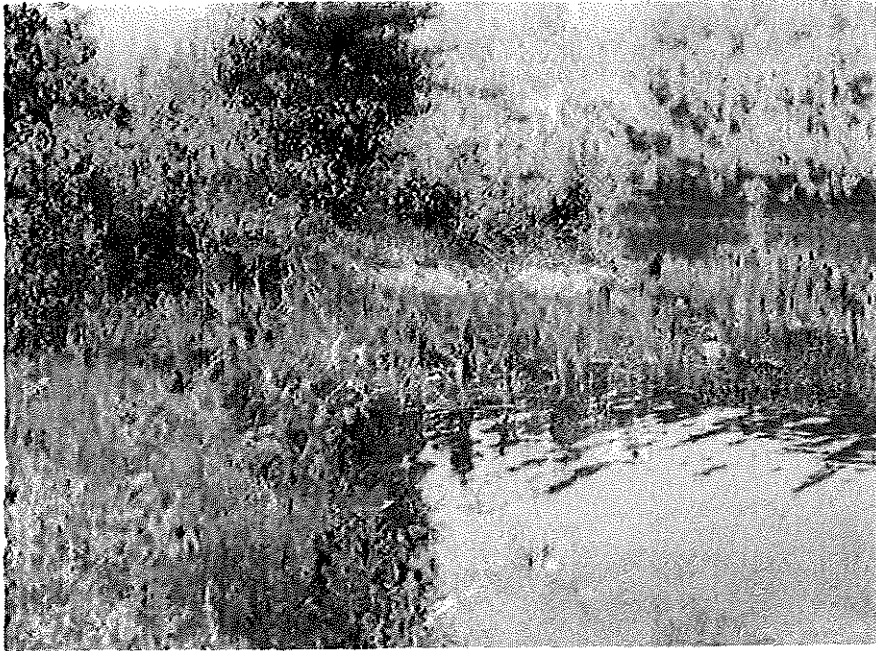


Photo 7: Wetland 4a

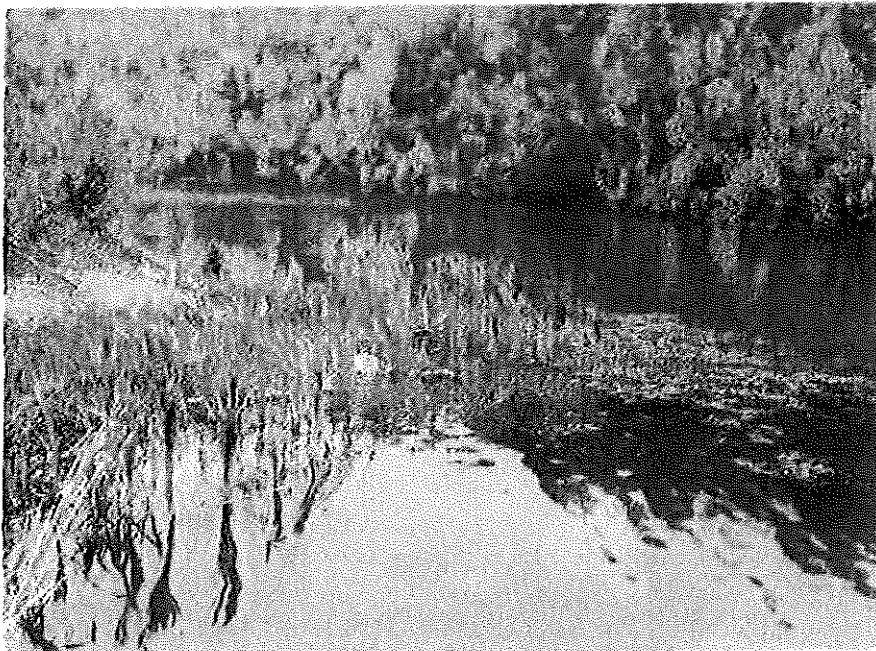


Photo 8: Wetland 4b





Photo 9: Wetland 4c



Photo 10: Wetland 5a





Photo 11: Wetland 5b

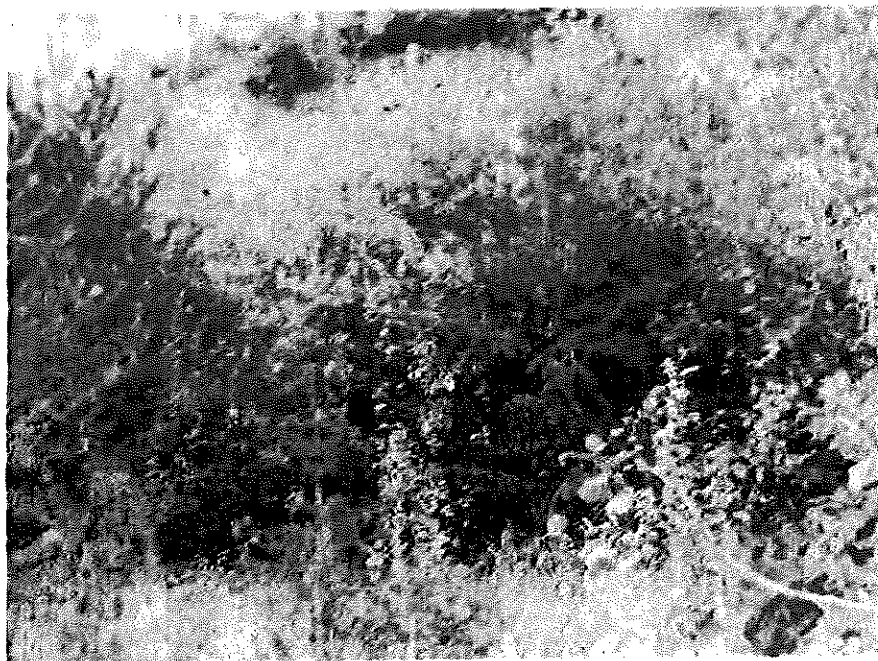


Photo 12: Wetland 6





Photo 13: Wetland 7

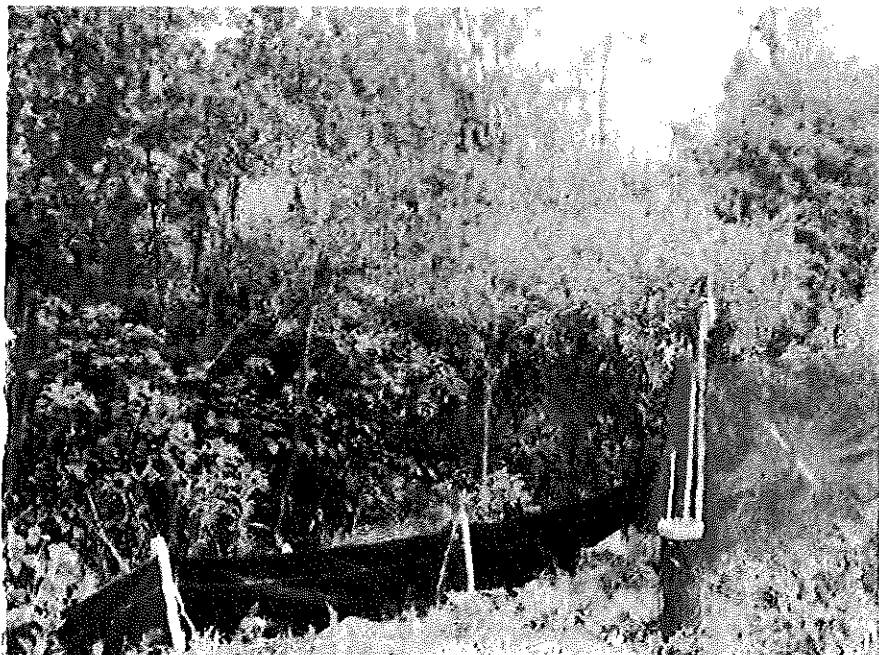


Photo 14: Wetland 8

